Overcoming Common Data Roadblocks

insightsoftware

Contents
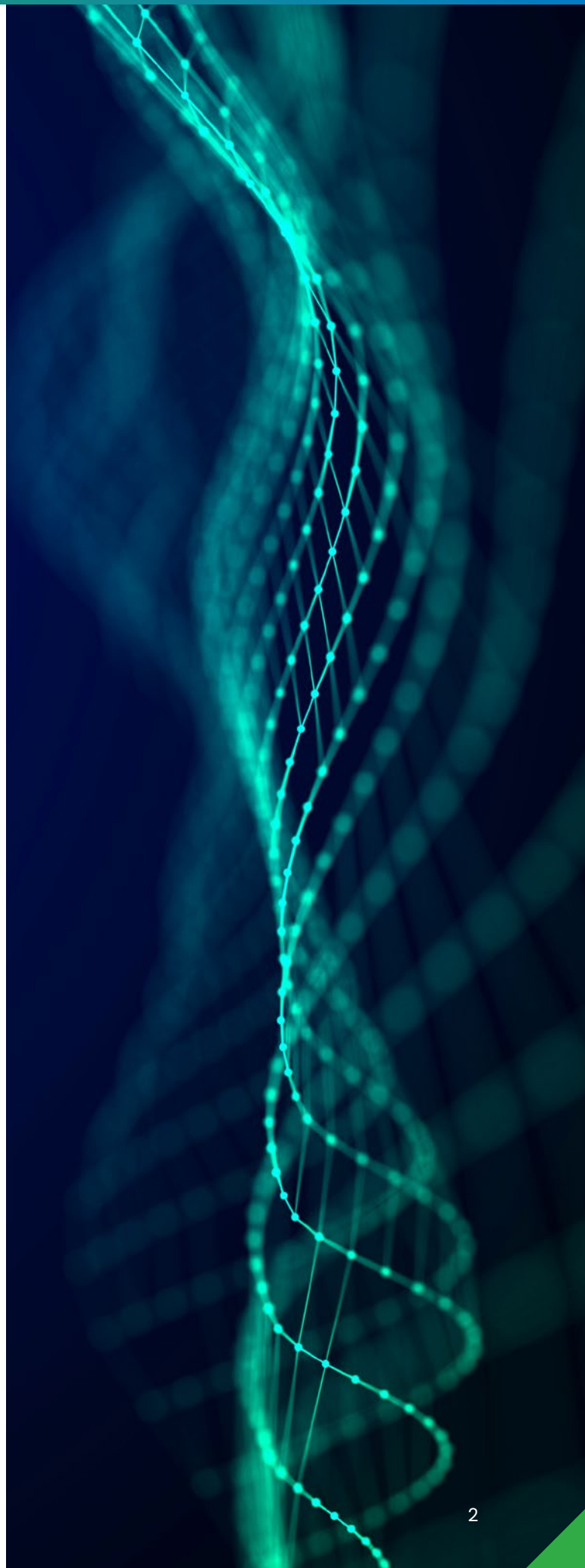
1 Introduction

Something is preventing your SaaS customers from making the most of their data. But what?

Is it your data management strategy? Your BI implementation? The customers themselves? Is the problem even something you as the software provider can impact?

If these are the questions currently plaguing your product team, this guide is for you. In it, we explore the symptoms, causes, risks, and solutions to the six most common data roadblocks affecting SaaS companies and their customers.

There's almost always something you can do to help nudge your technology and its usage in the right direction, so read on to discover what actions you can take to boost the impact of your data offering.

2 Data Silos

A data silo is an information repository that is either isolated from stakeholders, other repositories, or both. Though they're easy to spot and generally known to be problematic, they're also one of the most common barriers to good data practice.

This is in part because young silos are typically limited in size and scope. It's not uncommon for business departments to develop their own recordkeeping systems or use specialized applications without considering how the data housed within them may one day become more broadly relevant. A tech startup might, for example, purchase CRM software for its sales department and a ticketing system for its support department. Though the two systems do not integrate with each other, these silos have yet to adversely impact the company, as neither department is interested in the other department's data.

The CRM and ticketing silos only become problematic with the advent of this startup's customer success team, which needs access to both repositories and the ability to join the data into one cohesive customer story. This is how data silos take companies by surprise.

Symptoms

Data silos come in many forms (applications, spreadsheets, databases, third-party resources, etc.) but are easily identified by the organizational problems they create. You may be dealing with this BI roadblock if:

> You cannot access a repository of relevant information.

> You cannot easily merge or join data between related repositories.

> You cannot manipulate or analyze a repository's data until you've exported it to a flat file.

> The data you need only exists as a flat file or in another static format.

> Changing a record in one repository does not automatically update related records in another repository, resulting in inconsistencies.

Causes

New applications and database management systems are being released at an unprecedented rate, so keeping up with customers' data integration needs can be tricky. Many SaaS providers offer out-of-box data connectors to partner applications, but sometimes these low-code options aren't available. Because most companies have little-to-no say in where their SaaS application data is collected, they must make do with the silo until they can migrate the data to a warehouse they control. Such a project can take months or even years depending on the company's technical resources, the number of siloes being merged, and how much transformation the data will have to undergo. This limbo period is typically where spreadsheets enter the picture.

Spreadsheets are great for small projects but should not be used for long-term data storage or analysis. Because they're static files, they quickly become outdated. They also don't typically come with any logging capabilities, so people can make changes without there being a record of it. Unless spreadsheets are hosted in the cloud, only one person at a time may access them. Because they must be updated manually, they're also especially prone to human error.

Even in the absence of these quality concerns, spreadsheets are cumbersome reporting tools and take longer than relational databases to query using a business intelligence solution.

Risks

Silos make it nearly impossible to get a complete picture of your data, and that can result in all kinds of operational inefficiencies.

On an episode of Data Talks titled "Escaping Spreadsheet Hell," BI consultant and "data whisperer" Jen Stirrup describes some of the silo scenarios she's encountered in the field. One company she consulted for stored all its employees' PTO data in a spreadsheet, and human error resulted in everyone's data getting jumbled. "The spreadsheet had two columns on it," she recounts, "the name and the number of holidays that the person had taken that year. But they'd sorted one column of the two and not the other. So that mixed up everybody's holidays." Another company needed a spreadsheet just to index all its spreadsheets.

**Fallout from data silos can include, but is not limited to:**

> Compromised data quality due to human error.

> Business decisions being made based on false or incomplete data.

> The inability of individuals and/or departments to coordinate with one another.

> Inconsistencies between data repositories and difficulty reconciling them.

> Lack of trust in an institution or system due to poor transparency.

> Workflow inefficiency.

> Lost revenue due to oversights.

Solutions

You can eliminate data silos either through storage or through reporting. If you use the storage method, you'll likely engage in some form of data warehousing. A data warehouse is "a repository of data that has undergone ETL (Extract, Transform, Load) processing, which may include information management and governance, for the purpose of integrating data from diverse sources and making it easier to analyze." This process is an opportunity not only to unite your data in one repository, but also to reconcile inconsistencies across sources and prepare it for more efficient querying.

The alternative is to access all data sources from one central reporting hub, such as a business intelligence solution. BI tools can typically connect to a wide variety of sources, making it easy to join across repositories with common data. If the data needs some massaging before it can be integrated, check to see if your BI tool can assist you in making those adjustments. Some allow for lightweight data manipulation and other convenient alternatives to data warehousing.

Whatever your method, the goal is to give all stakeholders access to the data pertaining to them and their work. The problems propagated by data silos tend to compound over time, making the transition to a centralized access point worth the investment in the long run.
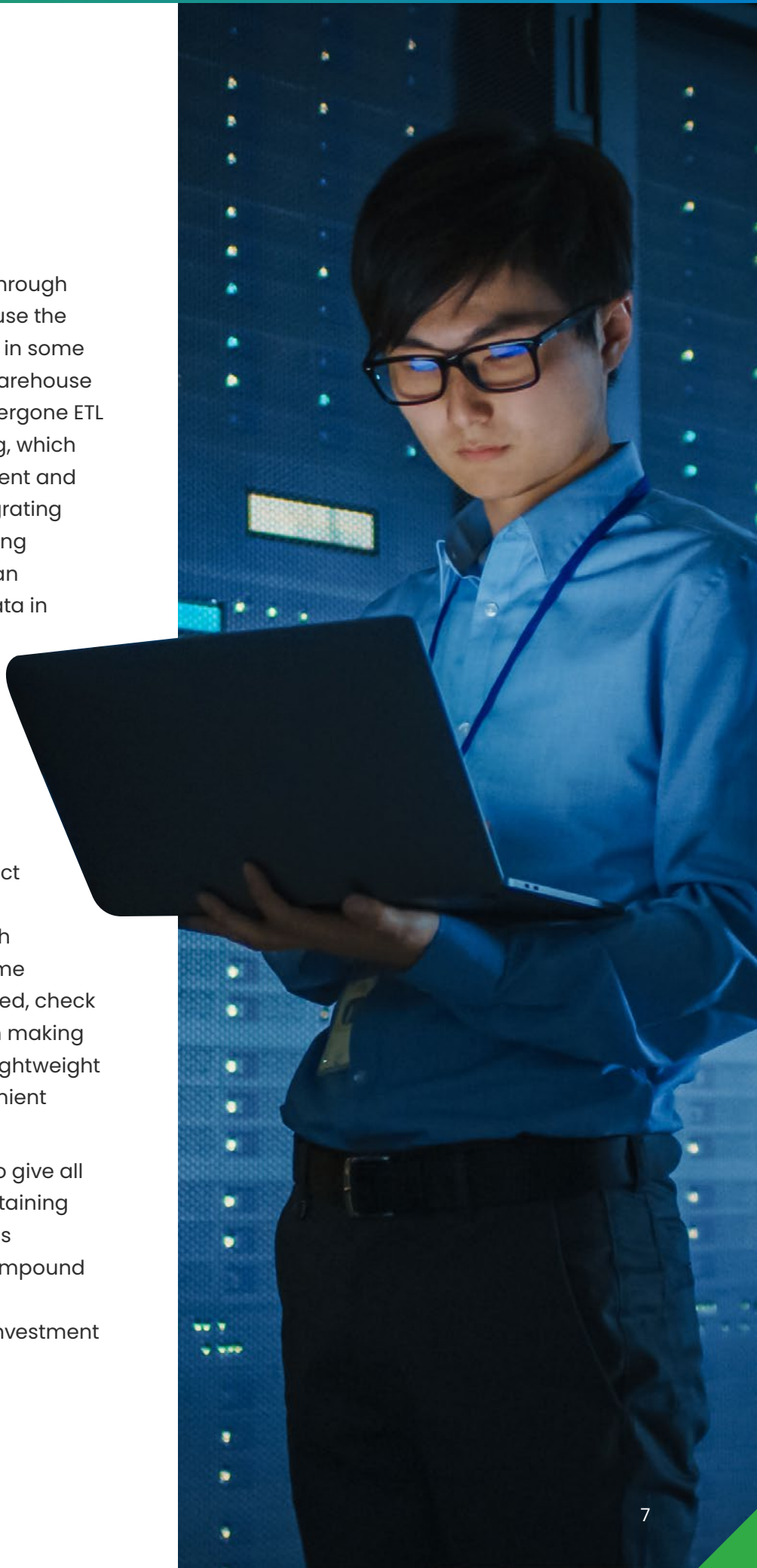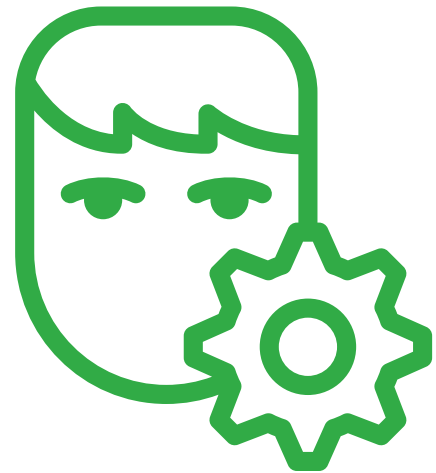
3 IT Bottlenecks

One of the most common impediments to healthy data practice is the IT bottleneck, a workflow dysfunction in which a SaaS provider's technical staff become overburdened with customer reporting requests. IT bottlenecks typically occur when SaaS vendors fail to provide their users with adequate reporting tools and training, leaving customers no choice but to request technical support.

Although information management and reporting are among IT's responsibilities, it's not all they do. They are responsible for installing, configuring, and maintaining the company's hardware, software, systems, and networks. Some IT teams include software engineers and data analysts as well, further broadening their purview.

When reporting requests come in, these technologists are forced to choose between risking the customer relationship and forsaking their other responsibilities. The customer relationship tends to take priority, which means the SaaS provider must contend with reduced productivity and mounting technical debt.

In severe cases, IT may be unable to work fast enough to keep up with reporting demand and end up with dissatisfied customers despite their best efforts.

Symptoms

You have an IT bottleneck if your ability to supply reporting assistance is outpaced by customer demand for that service. How much time you are willing to devote to ad hoc report generation will depend on the size of your IT team and the scope of its duties. Signs of a bottleneck include:

> Your IT team growing frustrated with the volume of reporting requests.

> Reduced IT productivity in non-reporting areas.

> Customers agitating for quicker turnaround on reporting requests.

Causes

IT bottlenecks are caused by inadequate reporting tools at the user level. What qualifies as "adequate" will of course depend on the SaaS application and its users' needs, but there are generally two classes of software user to accommodate: technical and non-technical. Non-technical users typically run and manipulate premade reports or build simple ones from scratch, turning to more technical users for help with more complex tasks. With the proper tools, technical users can then furnish most of their organization's ad hoc reporting needs.

SaaS providers wishing to avoid or alleviate IT bottlenecks must accommodate both user groups. If non-technical users cannot see to their basic data needs, they will overload their technical users with requests for help, who will in turn offload some of that work onto the SaaS IT team. If non-technical users are mostly taken care of but technical users have limited access to advanced tools, more custom reports will again become the responsibility of the SaaS IT team.

So here are some scenarios that could cause either one or both user groups to struggle for data insights:

> Your application's reporting solution doesn't accommodate enough use cases.

> Users cannot build the right kinds of reports.

> Users cannot perform the right calculations.

> Users cannot build the right charts.

> Your application's reporting solution is too difficult to use.

> The user interface is too confusing.

> The way the data is presented is too confusing.

> Users do not have access to adequate training, tutorials, or documentation.

> Your application doesn't provide users with the right canned reports.

> Your users must export their data in order to access and analyze it.

> Your users cannot export their data.

> Risks

In addition to frustrating both your IT team and users, IT bottlenecks can result in decreased workplace productivity (both internally and for your customers), decreased software sales, and increased customer churn. It can also tarnish your brand's reputation.

Solutions

Once you've diagnosed the cause of your IT bottleneck, you can work to alleviate it. Increasing access to business intelligence and reporting tools is of course an important component, but those tools must also be accessible to both technical and non-technical users. This means selecting user-friendly tools to begin with and providing proper training and documentation to help users over the learning curve. Simply hiring more IT professionals isn't a long-term solution, as the problem will grow in proportion to the size of your customer base. Plus, IT staff are more valuable both to the SaaS provider and its customers when given more bandwidth.

Even with proper tools in place, IT will have a role to play in creating and maintaining canned reports, but this is far less time consuming than fielding ad hoc requests. A good rule of thumb is to attempt to cover 80% of customer reporting use cases through the canned report library and any interactive configuration tools users may apply to narrow or style the results. With a sophisticated enough BI solution, the remaining 20% of cases may then be met by customers' own technical teams, leaving SaaS IT staff free to focus on internal projects.

Even with proper tools in place, IT will have a role to play in creating and maintaining canned reports, but this is far less time consuming than fielding ad hoc requests.

4 Overburdened Analysts

Large enterprises often leave the majority of reporting tasks to business analysts, data analysts, and data scientists who furnish incoming requests using a ticketing system. Unlike SaaS IT teams, BI analyst teams are hired to build reports for others — but that doesn't mean they can't also become overburdened. Analyst teams can become backlogged for any number of reasons, but that overwhelm reflects badly on the solutions they use and can tarnish the vendor-customer relationship.

It's in a BI purveyor's best interest to consider analysts not just in their product design, but also in their customer success conversations, as BI analysts play a critical role in the software's utility.

Unlike the last two roadblocks we explored in this series, overburdened analysts are external to your SaaS company and therefore a bit more difficult to detect. These are your customers companies' BI power users, the ones who use your analytics tool the most. Those of your departments in closest contact with these individuals are likely Support and Success, so check there first for the following symptoms:

A customer's BI-related support tickets:

> Are high in volume and/or frequency

> Convey persistent frustration.

> Contain data management requests or clarification around data structure.

> Request that less technical users be given analytical controls.

A customer's success check-ins reveal:

> That BI analysts cannot keep up with reporting demand.

> That reports take too long to create.

> That the tool is too difficult to use.

> That the tool is lacking in functionality.

These symptoms don't necessarily indicate an overburdened analytics team but should be probed for further information, just in case this user group is indeed facing difficulties.

Causes

The root cause of BI analysts growing overwhelmed and backlogged can be either related or unrelated to the BI tools in their arsenal. More often than not, it's some combination of the two. SaaS vendors can have a direct impact on many of the technological hurdles while consulting customers on navigating the more interpersonal challenges.

Technological

> **Poor data quality and/or management.**
This is by far the number-one frustration BI analysts face in their daily work. Wrangling "dirty" or low-quality data takes a great deal of time, but analysts have little choice in the matter. The best they can do is report the issues and hope that they'll be fixed at a later date. In the short term, they have to compensate for poor quality using tricks and transformations in order to fill the request and pass the right information on to stakeholders. Sometimes stakeholders unearth data quality and modeling issues by singling out a metric that "looks off" and asking analysts to explain how they arrived at it. In either case, BI analysts are made less productive by inadequate data governance practices.

> **Too many requests for basic reports.**
If stakeholders have little- to-no access to analytical tools, even relatively simple reporting tasks fall to BI analysts. Easy though they may be to build, basic reports also tend to be numerous and so similar to each other that they're almost redundant. If analysts are spending time on year-over-year sales reports, they'll have less time to work on more strategic, higher-stakes projects.

> **Excessive learning overhead.**
Some BI tools require more training than others, and those that require the most can make it more difficult to onboard new analysts. Some BI solutions require analysts to be well-versed in a number of programming and querying languages beyond SQL and R. MDX (or a proprietary version of it) is often needed in order to query multidimensional databases (also known as MDDBs, data cubes, or just "cubes"). Other BI solutions are part of an extended suite of tools, each with their own language. While these challenges contribute to analysts' professional development, they can also reduce time to insight, particularly at the outset.

> **Trendy but untenable solutions.**
Analysts are sometimes pressed into using trendy technologies such as machine learning, artificial intelligence, or natural language processing not because they solve a business problem but because the company fears not having them will put it at a competitive disadvantage. Putting the cart before the horse in this way can lead to wasted time for BI teams.

Interpersonal

> **Unclear project requirements.**

It can sometimes be challenging for stakeholders to communicate what they want in a report, particularly in terms the analyst will be able to translate into a design. Other times, stakeholders have a question but only a vague idea of what data might help them answer it. It can take a lot of back-and-forth to hone in on requirements and even more back-and-forth to edit the initial drafts.

> **Redundant requests.**

Sometimes stakeholders submit tickets for reports that are already available to them. BI analysts must then take the time to direct colleagues to the report or dashboard they're looking for.

> **Ingratitude.**

You've likely heard the trope that good design is invisible. Well, the same goes for report design. Highly effective BI analysts make reporting look easy: their work is always clean, accurate, and to specification. It can be easy for stakeholders to take BI analysts' time for granted under these circumstances, particularly if they have little firsthand experience with the data.

Risks

Just as BI analysts sometimes take the fall for dirty data, BI solutions (and the SaaS applications into which they are embedded) sometimes take the fall for dysfunctional BI departments. Overburdened analysts not only dilute the benefits of BI for your customers, but also put those relationships in jeopardy. While many of the problems plaguing BI professionals are outside the purview of SaaS vendors and their BI solutions, software providers can play a role in helping their customers correctly identify the cause of their BI backlog.

Solutions

There's a lot you can do as a BI-enabled SaaS provider to support your customers' analysts. Here are some strategies to help BI departments from becoming backlogged:

> **Assist in data management and quality control.**
> Depending on how your customer data is entered and stored, you may have some control over its quality and structure. Encourage analysts to reach out with their concerns, and do what you can to clean and organize the data on the backend. If the problem is primarily with how data is being entered, consider making changes to your application's forms that help prevent dirty data from being submitted in the first case (e.g., data validation, required fields, sample text, tooltips, etc.).

> **Prioritize usability.**
> Low- or no-code BI is not only more accessible to non-technical users, but also makes it easy for BI analysts to learn the software quickly. It also reduces the amount of time they'll devote to troubleshooting syntax and combing through code.

> **Supply self-service and ad hoc reporting to non-analysts.**
> If stakeholders have direct access to basic analytical tools, not only will they submit fewer requests to their BI department, but they'll also have a deeper appreciation for analysts' work and be inherently more respectful of their time. Building simple reports and making small changes to those already available in their libraries will also familiarize them with the data, better equipping them to articulate their requirements when they do submit a request.

> **Offer counsel.**
> Make yourself a ready resource for other BI-related concerns. Supply customers with best practices for gathering project requirements, for example, or suggest ways leadership might reinforce adoption of existing reports and dashboards.

Supporting your customers means empowering their analysts to meet reporting demands, either through technological solutions or business know-how. Their success with your product will not only boost your brand image, but also help you land additional contracts as they move on to new job opportunities

5 Low Latency Literacy

No set of sophisticated analytical tools will compensate for low data literacy. As enterprises become more data-driven, knowledge deficits around data are becoming more noticeable.

This is one of the leading criticisms of self-service business intelligence tools, for example. Critics of the technology say business users are simply too unskilled to be trusted with it. In **Five Drawbacks to Self-Service BI**, Matthew Gierc points out that those without an IT or statistics background are much more likely to commit data fallacies, thereby leading their companies astray. Nimrod Avissar worries that ad hoc data modeling will lead to "**data anarchy**." Hyperbole aside, enterprises are beginning to see their well-intentioned data strategies stymied by low literacy.

SaaS companies offering embedded BI as part of their products are indirectly affected by low data literacy. If a customer is getting little to no value out of the BI solution embedded in your product, they'll be more likely to downgrade their subscription or, worse, churn away to a competing SaaS vendor. For this reason, it is valuable for SaaS vendors to be aware of this BI roadblock and encourage data literacy education.

Symptoms

Gartner **defines** data literacy as:

"…[T]he ability to read, write and communicate data in context, including an understanding of data sources and constructs, analytical methods and techniques applied — and the ability to describe the use case, application and resulting value."

From this, we can deduce that an enterprise is suffering from low data literacy if employees:

> Are unable to accurately interpret reports and/or data visualizations.

> Cannot create effective reports and/or data visualizations.

> Fail to provide adequate statistical evidence for their claims.

> Succumb to statistical fallacies.

> Are unfamiliar with the data they're sourcing, either semantically or architecturally.

> Aren't proficient in the data analytics tools used by the company.

Of course, data literacy levels in an enterprise can be difficult to detect organically; most are discovered as the result of a blunder. Rather than wait for employees to make costly mistakes, enterprises can have employees complete a data literacy assessment.

Causes

Low data literacy is caused by a lack of education, both formal and informal. Not only is data misinterpretation rampant in the popular media, as data visualization expert Alberto Cairo demonstrates in Arguing with Charts, but many Americans find it challenging even distinguishing facts from opinions.

A **2018 Pew Research** survey asked over 5,000 U.S. adults to categorize five statements as either fact or opinion, and "roughly a quarter got most or all wrong."

Many also conflate "data" with "fact," treating statistics as incontrovertible when, as a colleague of mine recently put it, "Data is never perfect; it provides a story based on an incomplete set of information." Revealing data as inherently limited is a critical first step in data literacy education.

On an institutional level, low data literacy results from a lack of leadership. Enterprises are responsible for their employees' training and should therefore ensure that all are equipped to navigate the company's data, data repositories, and analysis tools.

Risks

Misinformation leads to misinformed decisions. Low data literacy, therefore, can cost companies revenue and adversely affect customer outcomes, further impacting the bottom line. In higher-stakes scenarios, it can even be hazardous.

As mentioned before, it can also result in BI-equipped SaaS products seeing low user adoption rates and/or low customer satisfaction where reporting and analytics are concerned.
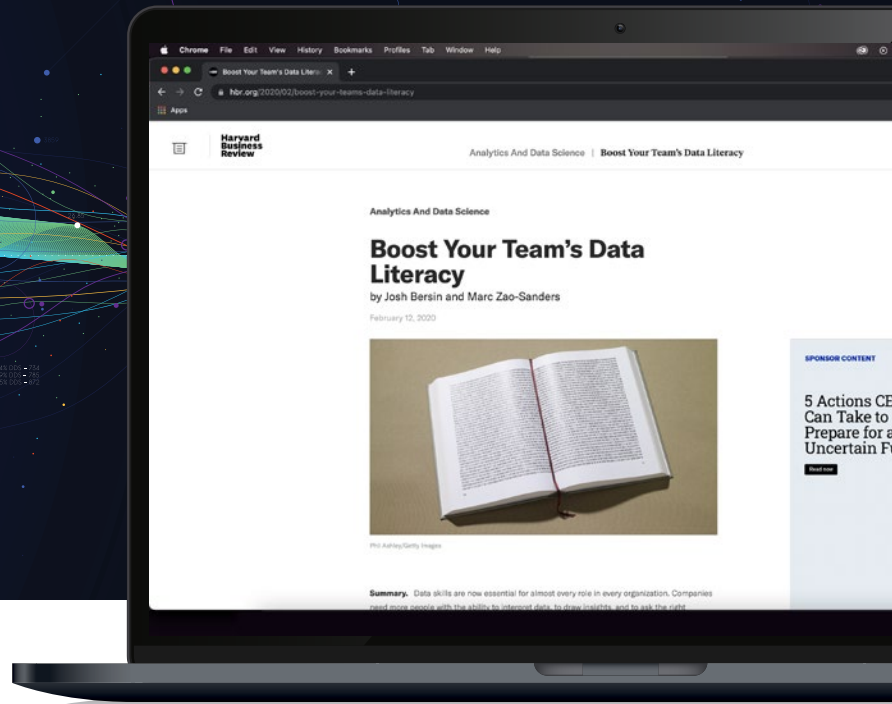
Solutions

[According to](#) the Harvard Business Review, "the responsibility [of teaching data literacy] has shifted from academic institutions to employers, where skills development programs are flourishing." SaaS vendors offering BI should encourage their customer companies to take one or all of the following steps toward boosting data literacy rates among their ranks:

1. Teach the tools.

This is something SaaS vendors can (and do) directly impact. By providing BI training materials, programs, and sessions virtually and at live events such as user conferences, BI-capable SaaS products can ensure that their applications are properly used.

2. Teach the data.

SaaS companies can have an impact here as well. In addition to briefing BI trainees on how their data is organized, SaaS providers may provide data documentation for ongoing reference. Data dictionaries and business glossaries can profoundly improve literacy around proprietary data.

3. Teach the fallacies.

Even if SaaS providers don't furnish this education themselves, they can provide the resources necessary for customer companies to train themselves. An awareness of statistical fallacies is critical to avoiding them. The more directly these fallacies are related to real business scenarios, the more effective the training will be.

4. Encourage peer review.

Editing is as critical to writing reports as it is to prose. Data visualizations, dashboards, and tabular reports should be critiqued by a peer or superior before they are published and distributed. SaaS providers can pass along report and dashboard peer review guidelines or even provide report editing as a billable service.

By taking an active role in customers' data literacy, SaaS providers help ensure the success of their BI offerings while boosting customer satisfaction.

6 | Data Overwhelm

Picking through data is a natural and necessary part of reporting. Wading through data isn't.

Organizations see diminishing returns on their business intelligence efforts when they present users with an overabundance of data. Report authors spend too much time looking for relevant information, and BI systems expend too much processing power on querying and displaying data. The problem often results in frustrated business users made more frustrated by sluggish systems.

But how much data is too much? This is less about hitting a target number of tables or records and more about considering what information is relevant to whom. Segmenting data sources so that individuals can easily locate pertinent information is critical, particularly with very large data sets.

Regarding the first symptom, it's important to distinguish between confusingly labeled data and irrelevant data. If a user cannot understand whether a field or table is relevant to them, they are experiencing a data documentation problem rather than a volume problem. These two issues are often related but are not the same thing. A database can be well documented but still contain large quantities of unhelpful or irrelevant data.

Exposing irrelevant data fields also leads to less efficient data processing. In many cases, extraneous fields exposed to BI users will end up involved in table joining and filtering, resulting in unnecessary slowdowns.

Causes

> **Insufficient Warehousing**

Just because a field exists in your raw, transactional database does not mean it should be in your reporting database. If business users are reporting directly off transactional data, this may explain why they are wading through unhelpful, irrelevant fields. Evaluate all key, id, metadata, and code fields before adding them to your BI data warehouse. In addition, be sure to sufficiently denormalize your transactional data for maximally efficient querying.

> **Lack of User Research**

It takes time and effort for organizations to discover what data their BI users value. It is very possible for non-id and non-key fields to be extraneous, and administrators won't know which fields these are without some inquiry. Admins can use activity logging, surveys, and interviews to get a clearer sense of users' data needs.

> **Poor Signposting or Permissioning**

Ideally, BI uses would be able to find the data most relevant to them either because it's the only data they have permission to access or because it's clearly labeled using terminology they understand. A sales representative might look for relevant data in a folder marked "Sales," for example, but be confused if the only folders available were marked "MSSQL" and "Postgres." Thoughtful signposting, combined with permissioning, will help funnel users toward the data they're most likely to be interested in.

Risks

An overabundance of data can lead to frustrated BI users, reporting errors, and slow report queries. All of these contribute to delayed business insights. Left unaddressed, data overwhelm can result in distrust of, and distaste for, the BI system as a whole. Rather than trouble with something slow and confusing, business users might rely on spreadsheets (which become data silos) or IT (which can become a bottleneck). In this way, too much data can result in low returns on your BI endeavors.

Solutions

Organizations can prevent data overwhelm by only exposing relevant information and making a concerted effort to guide BI users toward the data subsets that concern them. Consider taking these steps:

1. **Eliminate irrelevant fields during data warehousing.**
   Look to remove fields that facilitate raw data storage or are only machine-readable. Monitor BI usage and adjust your warehousing practices as needed.

2. **Segment data into clearly labeled subject domains.**
   Properly group and alias tables, models, fields and any other data elements with which BI users may interact. Once again, monitor usage and user feedback for opportunities to improve this signposting.

3. **Archive.**
   Protect your database servers (and users' experiences) by archiving old records. Whether you gate this archive behind a permissions wall or leave it exposed, having it separate from more current records will help prevent data overwhelm and unruly report executions.

4. **Tenant.**
   Restrict users to certain data sets until such time as their organizational roles or responsibilities require access to other sets. Make sure BI users know who to contact with these requests.

5. **Document.**
   Even manageable volumes of relevant data can be confusing. Organizations can help prevent the feeling of data overwhelm by providing data dictionaries and business glossaries as supplemental guides.

Follow these tips, and not only will your BI users feel more at home in their reporting applications, but the applications themselves will be more efficient.

7 High Data Latency

[Data latency](#) as it applies to business intelligence is "how long it takes for a business user to retrieve source data," whether it be in the form of a report or dashboard. Even the most sophisticated data systems experience some form of latency, as it takes time to pass data from one server to another; but some are especially prone to latency issues.

Data exporting and analysis via spreadsheet is one such system. The manual work involved dramatically increases time to insight and increases the likelihood that a record or calculation will be obsolete by the time it reaches a decision maker. High- volatility, high-stakes data sets should be the easiest to retrieve and the least latent.

Symptoms

How latent is too latent will depend on the use case. One company may have no trouble waiting a few hours for a static report to be manually updated while another might take serious issue with a dashboard needing more than four seconds to load. It all depends on context.

Signs you or your organization may be struggling with data latency include:

> Speed of data retrieval is slowing business operations.

> Speed of data retrieval is slowing customer service or otherwise adversely impacting customer experience.

> The most up-to-date reports and dashboards available are displaying old data.

Causes

One or more steps along your organization's data processing pipeline could be contributing to the data latency issue. Here's a scenario common to young organizations and business departments:

| CRM | Data Export | Spreadsheet | Manual Analysis | Static Report | Email | Stakeholder |
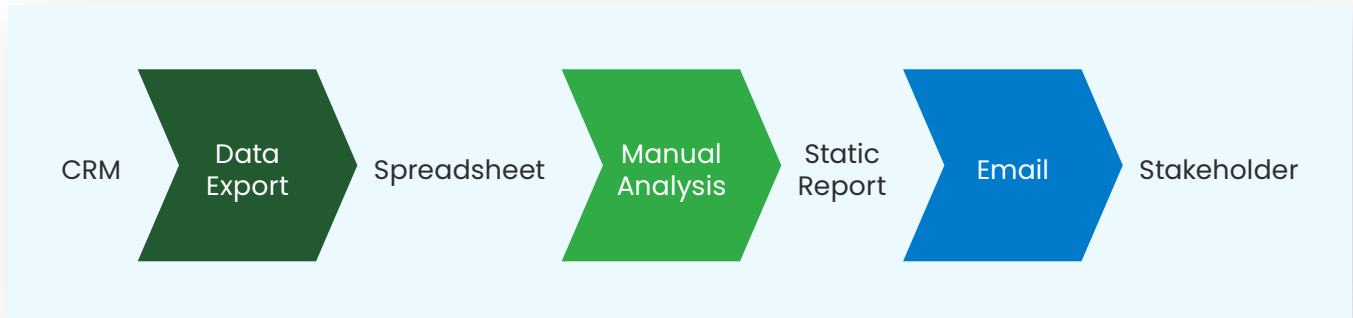
Data exports can take anywhere from a few seconds to several minutes, depending on the system and the volume of data being exported. Still, the bulk of retrieval time is likely going to the manual analysis stage. The raw data isn't usable to the stakeholder in this scenario, so an analyst must either design a new report or update an existing report with fresh information before emailing it.

In another processing pipeline, the cause of latency could be entirely different.

| Transational Database | ETL | Data Warehouse | Query | Stakeholder |

Here, assuming ETL (Extract, Transform, Load) is configured to take place overnight, querying is the likely holdup. The volume of data being retrieved might be exceptionally high or the BI solution poorly configured to perform that type of query.

Data latency causes should be assessed on a case-by-case basis, but here are some common ones to consider:

> A manual step in the process is slowing retrieval.

> ETL is not being performed often enough or at the appropriate times.

> The database or warehouse server(s) is/are being overtaxed and cannot handle the processing load.

> The warehouse architecture is not optimized.

> The database needs to be scaled to handle load.

> The BI web server(s) is/are being overtaxed and cannot handle the processing load.

> The BI application's configuration is not optimized.

> The BI application needs to be scaled to handle load.

Risks

Data latency can cause operational delays, inefficiencies, and in the most severe cases result in data staleness and misinformation. Delays and inefficiencies

can adversely affect customer satisfaction and, therefore, impact revenue. Misinformation often results in poor decision making and, depending on the decision, can have a lasting impact on the business. Users of high-latency BI solutions are also likely to desert the application in favor of other systems, reducing the return on your BI investment.

Solutions

Organizations that rely on manual data processing are at much higher risk of experiencing data latency fallout, particularly if their data is highly volatile. Adopting a BI solution can dramatically reduce time spent turning raw data into usable insights by automatically refreshing existing reports with fresh information.

Those already leveraging BI can work to optimize their data processing pipelines by first identifying the bottleneck and then working to alleviate it. As indicated in the Causes section, this is likely to involve scaling and/or configuring your data source(s) and/or BI application server to handle additional load more efficiently.

In rare cases, organizations may find their BI solution is simply incapable of meeting their latency goals. In the search for an alternative application, it's helpful to read about assessing product performance. Enterprises need access to technology that will scale with them and be able to meet their evolving data latency requirements.

Logi Embedded Analytics: Purpose-Built for Software Teams

Product teams need intuitive analytics and data visualization capabilities in their applications, purpose-built for every users' unique role and skills. Logi's embedded analytics solutions, by insightsoftware, empower you to design and deploy analytics into the fabric of your organization and products. These analytics integrate with your existing workflows and security models providing a seamless experience where anyone can analyze data, share insights, and make informed decisions.

Learn more at **insightsoftware.com/logi-analytics/**

About insightsoftware

insightsoftware is a leading provider of reporting, analytics, and performance management solutions. Over 30,000 organizations worldwide rely on us to support business needs in the areas of accounting, finance, operations, supply chain, tax, budgeting, planning, HR, and disclosure management. We enable the Office of the CFO to connect to and make sense of their data in real time so they can proactively drive greater financial intelligence across their organization. Our best-in-class solutions provide customers with increased productivity, visibility, accuracy, and compliance.

insightsoftware